MARKET OPPORTUNITIES FOR USER SITE HARDWARE SERVICES FROM REMOTE COMPUTING SERVICES COMPANIES

VOLUME I

CUSTOM REPORT

Prepared For:

CONTROL DATA CORPORATION

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MARKET OPPORTUNITIES FOR USER SITE HARDWARE SERVICES FROM REMOTE COMPUTING SERVICES COMPANIES

VOLUME I

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MARKET OPPORTUNITIES FOR
USER SITE HARDWARE SERVICES FROM
REMOTE COMPUTING SERVICES COMPANIES

VOLUME I

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I INTRODUCTION

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A. PURPOSE AND SCOPE

- The primary objectives of this study of the market for user site hardware services (USHS) from remote computing services companies were to:
  - Determine the market for information processors at customer sites from RCS companies.
  - Estimate market penetration based on alternative marketing strategies, including the approaches of ADP Network Services, Inc., National CSS, Inc., and GEIS Company.
  - Analyze the sales and buying processes for the products.
  - Make recommendations for both market entry and expansion.
- Following on the earlier work presented in INPUT's report, "Opportunities in User Site Hardware Services," INPUT conducted an in-depth analysis among vendors, EDP managers, financial executives, and end users concerning attitudes toward, and plans for, RCS vendor-supplied user site hardware services.
- Each client was contacted for their special concerns.

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- Issues that are client specific are addressed here in Volume I.

- Concerns common to all participating clients are included in the general research reported in Volume II.

B. RESEARCH AND METHODOLOGY

- The research conducted in this report primarily addresses RCS vendor offerings termed user site hardware services (USHS) which:

  - Place intelligent hardware (i.e., terminals, microcomputers, minicomputers) at the user's site, or at the vendor's site dedicated to the user's use.

  - Offer user access to the RCS vendor's communications network.

  - Offer user access, through the vendor's RCS networks, to the RCS vendor's mainframes or to other RCS vendor intelligent hardware supplied to the user.

  - Offer significant vendor-supplied software for execution on vendor-supplied intelligent hardware.

- User site hardware services (USHS) are viewed as an alternative delivery method of remote computing services (RCS). As such, USHS both impacts and expands that marketplace.

  - Impacts by replacing vendor remote delivery services revenues.

  - Expands by replacing in-house timesharing and by offering new services to additional USHS users.

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- The study focused on the USHS approaches and offerings of three current vendors:
  - ADP Network Services, Inc. ONSITE system.
  - National CSS, NCSS 3200 series system.
  - GEIS Company MARKLINK distributed system.
- The planned research for this study consisted of a set of questionnaires developed by INPUT in close coordination with participating clients, used for both telephone and on-site interviews.
- Interviews were conducted during the fourth quarter of 1979.
- The interview sample of 99 companies provided three types of respondents:
  - End users (72).
  - EDP managers (59).
  - Financial executives (21).
- The research contrasted differences among respondents in approach toward, and involvement in, the decision process for USHS.

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II EXECUTIVE SUMMARY

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A. MARKET FORECAST

- There is a significant market opportunity for user site hardware services offerings from computer services companies now in remote computing services (RCS) markets.

  - INPUT forecasts the total USHS market in 1984 to be $1 billion (Exhibit II-1), which is 13% of the forecasted RCS market.

  - The utility processing services portion of the USHS market, the focus of this study, is forecast to be $300 million by 1984, which is 15% of the forecasted utility services market.

    . Utility services is a new USHS market and is typified by the offerings of National CSS, Inc., ADP Network Services, Inc., and GEIS Company.

    . This market is vulnerable to competition from minicomputer vendors and RCS companies.

  - The industry specialty services portion of the USHS market is forecast to be $600 million by 1984.

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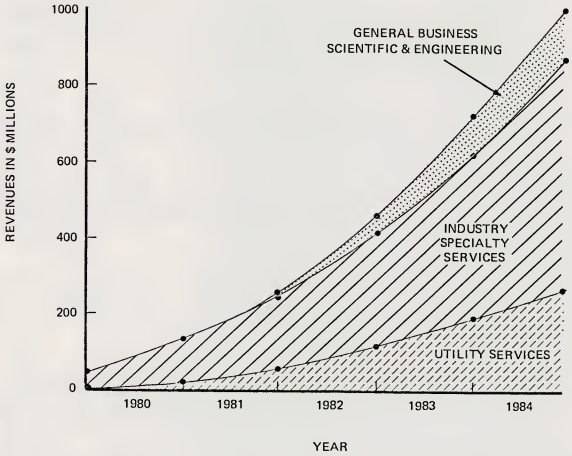
EXHIBIT II-1

USER SITE HARDWARE SERVICES
MARKET IN THE UNITED STATES



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  - . Industry specialty services, a more developed market with many active vendors, is less vulnerable to competition from minicomputer vendors.

- Utility services and industry specialty services together are expected by INPUT to represent 90% of the USHS market in 1984.

- The USHS market is driven by cost, which makes conversion of RCS services to in-house systems increasingly attractive to users.
  - This is due, in large measure, to continuing reduction in both hardware computational and data storage costs.
  - However, users' inability to track and put a budgetary ceiling on RCS costs is also a very important factor.

- User site hardware services, part of the evolving distributed data processing market, represent a significant new delivery system alternative to traditional remote computing services.
  - Market potential for USHS vendors is excellent. USHS offers low-cost entry into the distributed data processing market, a market now primarily in-house.
  - Other significant advantages offered by a USHS market strategy include:
    - . A potential method of getting a portion of in-house timesharing expenditures.
    - . Evolving specialized services utilizing proprietary software systems integrated with network services.

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. Providing entry into the small user area where EDP expenditures are less than $2,000 per month.

B. MARKET STRATEGY AND MARKET PENETRATION

1. MARKET STRATEGY

- Key reasons for buying USHS (as shown in Exhibit II-2) should be reflected in the formation of vendor marketing strategy.

  - End users and EDP managers, both essential to buying USHS, should both be included in USHS marketing plans.

  - In some instances, both agree as to the most important reasons for buying USHS, as in the case of Exhibit II-2, where the combined ratings of both end users and EDP managers are complimentary.

  - Cost effectiveness is the most compelling reason for replacing RCS with USHS.

    . USHS conversions of RCS achieved cost savings averaging 40%, ranging to 60%, among existing users in this study.

    . RCS costs are regarded by users as too high. They are also regarded as unpredictable, making budgeting difficult.

- However, EDP managers, protecting their empires, did not feel that USHS could be as cost effective for in-house timesharing as present mainframes.

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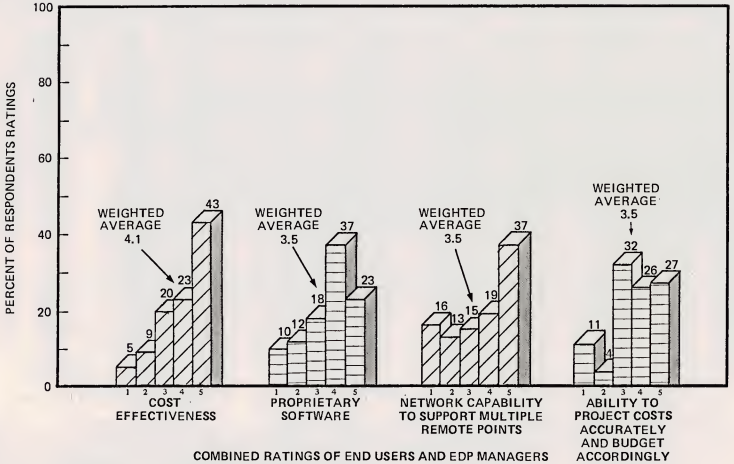
EXHIBIT II-2

KEY AREAS OF AGREEMENT AMONG
EDP MANAGERS AND END USERS FOR BUYING USHS



NUMBER OF END USER RESPONDENTS = 61
NUMBER OF EDP MANAGER RESPONDENTS = 56
NOTE: RATED ON A SCALE WHERE 1 = LEAST IMPORTANT AND 5 = MOST IMPORTANT

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- The prevalent reason for rejecting USHS found in the study was EDP and corporate management reasoning that USHS was less cost effective than incrementally adding to mainframe capacity to provide time-sharing in-house.

- The prevalent attitude of EDP managers highlights the need to coordinate the marketing of USHS to EDP managers, as well as to end users.

- End users and EDP managers agreed on the importance of vendor proprietary software for USHS.

- Network capability to support multiple remote points was rated highly by both end users and EDP managers.

  . Initially, the network was not regarded as essential by some users, but communications capability was recognized as being essential in future years.

- In other instances, end users and EDP managers rated major reasons for buying USHS very differently, reflecting their contrasting interests and responsibilities, as shown in Exhibit II-3.

  - End users feel that EDP departments are unable to provide internal services equivalent to USHS.

    . Applications development backlogs are averaging 20 months and growing larger.

  - End users want to improve turnaround by having a USHS capability for doing applications development at users' sites.

  - EDP managers gave more priority than did end users to reliability/backup and to maintenance/support.

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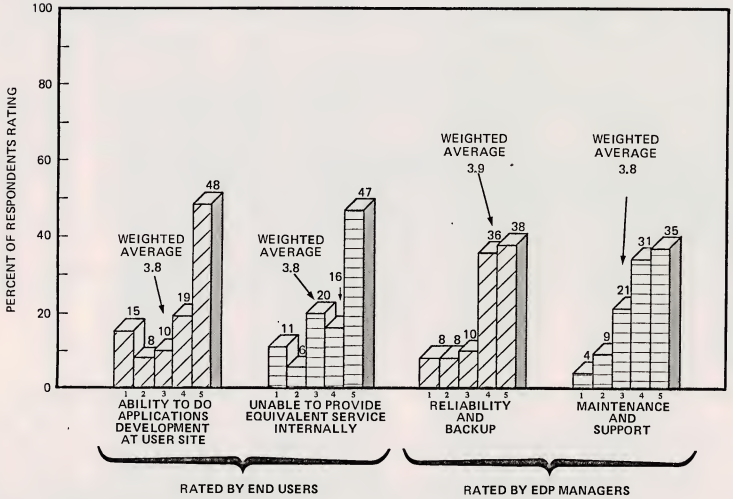
EXHIBIT II-3

REASONS FOR BUYING USHS AS
RATED SEPARATELY BY END USERS AND EDP MANAGERS



NOTE: RATED ON A SCALE WHERE 1 = LEAST IMPORTANT AND 5 = MOST IMPORTANT

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- Other reasons for buying USHS that received low ratings from both end users and EDP managers were:

  - Offloading the in-house mainframe.

  - Consolidating outside RCS timesharing contracts.

  - Providing access to remote data bases.

2. MARKET PENETRATION

- National CSS, Inc. market strategy is to sell the IBM-compatible NCSS 3200 series initially as a standalone processor, integrated with NCSS operating software, and optional integration with the NCSS network, using the network for distributed data processing, backup mainframe processing, and maintenance.

  - The 3200 is offered for purchase or third-party lease.

  - Initial emphasis is to install the units on a standalone basis, with a later effort to tie them to the network after the 3200s have met with customer acceptance.

- INPUT estimates that at year end 1979, NCSS had sold twenty-six 3200 series systems.

  - Including maintenance and network charges, INPUT estimates the total revenues from these sales to be $7.5 million.

  - NCSS revenues from USHS deliveries in 1979 were $5.7 million.

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- ADP Network Services, Inc. strategy is to lease the ONSITE system, integrated with ADP operating software, and with the ADP network, using the network for data communications, backup mainframe processing, and maintenance.

  - INPUT estimates that at year end 1979, ADP had installed 29 ONSITE systems.

  - The ongoing lease base from these installations is estimated to be $6 million per year.

  - INPUT estimates ADP 1979 revenues for USHS to be $3.5 million.

- GEIS Company MARKLINK distributed system is offered for lease or purchase on an unbundled basis. Intelligent terminals are integrated with GEISCO operating software, the MARK III network, and GEISCO clustered computer centers. The network is used for data communications, processing, and maintenance.

  - MARKLINK was introduced late in 1978; the product expanded late in 1979, with marketing efforts now being intensified.

  - The first MARKLINK installation is an 800-terminal, national inventory control system for the GE Supply Company. The system is now partially operational.

  - MARKLINK, if successful in the commercial marketplace, will address a larger potential market than that addressed by NCSS or ADP. It is too early to predict market penetration.

3. CONCLUSIONS

- Prospects are good for extending initial USHS installations to multiple sites.

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- None of the existing USHS users interviewed had more than one installation, but several have plans to extend use to multiple sites in the next three years.

- EDP managers reported that the number of potential USHS installations averaged 9 per company, ranging up to 50.

- INPUT expects the number of intelligent terminals and distributed processors in networks to double in the next five years, accounting for 50% of all EDP services to remote locations.

- Vendors are treating USHS as a part of the distributed data processing market.

  - USHS provides RCS companies with a means to compete in the evolving DDP marketplace.

  - Although initial USHS installations make limited use of the network, future emphasis will include networking to offer access to remote data bases and to interconnect multiple remote sites.

- Lacking internal capacity to meet end users' needs, EDP managers are feeling the pressure to:

  - Provide for applications development at the user's site.

  - Buy outside software packages.

- Users felt that using the in-house mainframe was often more cost effective for timesharing than USHS.

  - In one case, a group of users, considering using the NCSS 3200 to offload the in-house mainframe, were particularly attracted to the DBMS software.

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. The users' final decision, in concert with the EDP manager, was to upgrade the mainframe because it was felt to be more cost effective.

- INPUT believes that consultive selling of USHS is important.
  - Current vendors of USHS are spending an average of nine person months per installation for sales, sales support, and technical effort.
  - Billing practices vary, but well over half of the effort is billed separately.
- End users and EDP managers have minimal knowledge of the USHS concept or of current vendors' USHS offerings.
  - Their knowledge of, and attitude toward, USHS can be greatly improved by marketing efforts of USHS vendors.
  - The rate of USHS market expansion will be a direct reflection of increased vendor product offerings in both the utility and specialty processing services segments of the RCS marketplace.
- An important use of USHS is for timesharing using data from the user's in-house mainframe.
  - Important features are data compatibility and ease of program transferrability between IBM mainframes and the USHS.
- Direct procurement of computer services and equipment by end users is very limited.
  - Only 20% of end users can buy on their own for expenditure levels of less than $10,000.

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- Expenditure levels above $10,000 nearly always involve the EDP manager and require corporate approval.

C. BUYING PROCESS

- The process for procuring computer equipment and services involves an interaction among the end user, EDP manager, financial management, and top management, with different levels of involvement during the procurement process.

  - Identifying need and establishing justification is a joint effort by end users and EDP managers, with occasional contribution by corporate financial officers.

  - Vendor selection is controlled by the EDP manager. End users have an involvement in the selection, but not the responsibility.

  - Vendor approval involves both the chief financial officer and top management, acting on the recommendations of the EDP manager.

  - Final approval of the procurement is generally reserved for corporate management, with recommendations from the chief financial officer.

  - The trend in computer equipment and services procurement is toward increased centralization, with corporate management increasing control of the final decision.

- The procurement process is taking an average of five months (ranging up to 24 months) from initiation to final decision for systems over $100,000.

  - The process is taking longer and growing more complex as purchases are more closely scrutinized by management.

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- End users have little authority to procure computer equipment or services on their own.

  - End users and EDP managers are working together in this regard, with the EDP manager generally controlling the procurement.

  - End users are developing greater sophistication in data processing as equipment is installed at the user's site. However, users are not presently separating themselves from EDP managers.

- INPUT expects, as time goes on, that end users will have a significantly greater voice in placing intelligence on-site for applications development and operation.

  - EDP managers, in a cooperative effort with end users, will (for purposes of standardization, compatibility, reliability, and maintenance) retain control over hardware and system support software procurement.

- Users have a decided preference for unbundled pricing, but have little preference for purchase versus lease pricing.

D. RECOMMENDATIONS

- In view of a $1 billion USHS market forecasted in 1984, INPUT recommends that CDC expand its product offerings and marketing efforts to include user site hardware services.

- INPUT believes that CDC should view with caution entering just the utility processing services market segment.

- A new CDC USHS product offering should be based on proprietary software, aimed at the industry specialty services market segment.

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- With USHS established in the industry specialty services market segment, USHS could also be offered to the utility processing services market segment.

- Marketing strategy should emphasize single application utilization at remote sites, considering the sale of each standalone product as part of a potential DDP node.

- USHS offerings should be aimed at specialty applications in industry market sectors with significant DDP market potential, such as:

  - Inventory control, including warehousing, for discrete and process manufacturing companies.

  - Order entry for distribution industries.

- In addition, INPUT has identified an industry specialty market area that would draw upon present CDC (SBC) strengths.

  - Offer a microcomputer-based system, connected to CDC's RCS network (SBC), for insurance agents and brokers.

    . Offer the microcomputer as a turnkey system at insurance agency sites for:

      - Agency management.

      - Agency accounting.

    . Offer network services between agents and carriers for:

      - Rating.

      - Underwriting.

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- Claims.

- Compatibility issues are important and should continue to be stressed.
  - Provide SNA compatibility with in-house mainframes.
    - An important use of USHS is timesharing, using data from the user's in-house mainframe.
- CDC marketing efforts should be coordinated with end users, EDP managers, and corporate management.
  - EDP managers are working closely with end users, assisting them in developing more sophistication in data processing and allowing greater user involvement in vendor selection.
  - When it comes to selecting the vendor and controlling the procurement, the EDP manager is still in charge.
  - Final procurement approval comes from corporate management.
- CDC marketing strategies should reflect end users' and EDP managers' key reasons for buying.
  - Both agree that the most important factors are:
    - Cost effectiveness.
    - Proprietary vendor-supplied software.
    - Network capability.
  - EDP managers also stress:

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- Reliability and backup.
- Maintenance and support.

- End users also stress:
  - Ability to do applications development at user site.

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III USHS FOR ENGINEERS (CAD/CAM)

III USHS FOR ENGINEERS (CAD/CAM)

- INPUT interviewed five end users who also used CAD/CAM. Although the sample size is not large enough to make rigorous judgement, some conclusions can be drawn from the respondent data.

- Respondents are still very much in the market for CAD/CAM systems. Three out of five had obtained their system for new applications development.

- IBM was the most frequently used and referenced vendor. Other vendors used or referenced are shown in Exhibit III-1.

- Three respondents reported annual software package purchases averaging $125,000 and computer utilization expenditures in excess of $1 million.

  - Three of five respondents felt CAD/CAM expenditures were rising as more applications were developed among using departments.

- One of the three respondents who felt that they would be adding new CAD/CAM features in the future, stressed the need for interconnecting minis with a mainframe (host or vendor) to share CAD/CAM from engineering routines to drawings among using departments.

  - Respondents voiced preference for buying design applications versus in-house development.

    . They felt that developing applications in-house was frequently too slow and too expensive.

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EXHIBIT III-1

CAD/CAM VENDORS AS REPORTED BY RESPONDENTS

VENDORS	NUMBER OF RESPONDENTS	
	USING	REFERENCING NEED
IBM CAD/CAM	2	-
AUTROL	1	-
COMMA SYSTEMS	1	-
SBC (CDC)	1	-
COMPUTER VISIONS	-	1
UCC	1	-
GENERAL AUTOMATION	-	1
DEC	-	1
COMPUTER GRAPHICS	-	1

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ABOUT INPUT

THE COMPANY

INPUT provides planning information, analysis, and recommendations to managers and executives in the information processing industries. Through market research, technology forecasting, and competitive analysis, INPUT supports client management in making informed decisions. Continuing services are provided to users and vendors of computers, communications, and office products and services.

The company carries out continuous and in-depth research. Working closely with clients on important issues, INPUT's staff members analyze and interpret the research data, then develop recommendations and innovative ideas to meet clients' needs. Clients receive reports, presentations, access to data on which analyses are based, and continuous consulting.

Many of INPUT's professional staff members have nearly 20 years experience in their areas of specialization. Most have held senior management positions in operations, marketing, or planning. This expertise enables INPUT to supply practical solutions to complex business problems.

Formed in 1974, INPUT has become a leading international consulting firm. Clients include over 100 of the world's largest and most technically advanced companies.

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